

Claims

- [1] A home appliance which enables power cable communication therewith, comprising:
 - a body forming an exterior of the home appliance;
 - a main control unit at the body, for making various kinds of control of the home appliance; and
 - a power cable communication modem at the body, for transmission/reception of various kinds of data to/from a remote monitor which monitors the home appliance remotely.
- [2] The home appliance as claimed in claim 1, wherein the power cable communication modem is connected to signal lines of the main control unit and a power line of the home appliance for transmission/reception of data to/from the remote monitor.
- [3] The home appliance as claimed in claim 1, further comprising:
 - a line connector having the signal lines of the main control unit and the power line of the home appliance connected thereto together; and
 - a line connection connector at the power cable communication modem for making the power cable communication modem to be connected to the signal lines of the main control unit and the power line of the home appliance at a time as the line connection connector is detachably connected to the line connector.
- [4] The home appliance as claimed in claim 3, wherein the line connector and the line connection connector are detachably connected to each other in shapes of a female terminal and a male terminal of a hook type.
- [5] The home appliance as claimed in claim 3, further comprising a connector cover for detachable connection to the line connector when the power cable communication modem is not mounted to the line connector for preventing foreign matters from infiltrating into the line connector.
- [6] The home appliance as claimed in claim 5, wherein the connector cover includes;
 - a plug portion for being placed in the line connector, and
 - a cover portion at rear of the plug portion for enclosing a circumference of the line connector.
- [7] The home appliance as claimed in claim 6, wherein the plug portion includes;
 - a hook for detachable engagement with a hook slot inside of the line connector, and

- an end the hook extended through a pass through hole in the cover portion so as to be exposed to an outside of the cover portion, for enabling handling.
- [8] The home appliance as claimed in claim 5, wherein the connector cover is formed of plastic or synthetic resin.
- [9] The home appliance as claimed in claim 1, further comprising:
a signal connector connected to the signal lines at the main control unit;
a power connector connected to the power line to the home appliance;
a signal connection connector at the power cable communication modem for connection to the signal connector; and
a power source connection connector at the power cable communication modem for connection to the power connector.
- [10] The home appliance as claimed in claim 9, wherein the signal connector and the signal connection connector, and the power connector and the power source connection connector are detachably connected to each other respectively in shapes of female terminals and male terminals of a hook type.
- [11] The home appliance as claimed in claim 1, wherein the power cable communication modem is a built-in type modem provided to an inside of the body.
- [12] The home appliance as claimed in claim 11, wherein the power cable communication modem is fixedly secured to an inside surface of the body with fastening members.
- [13] The home appliance as claimed in claim 11, wherein the power cable communication modem is fixedly secured to a fixing bracket on an inside surface of the body.
- [14] The home appliance as claimed in claim 1, wherein the power cable communication modem is of an exterior mounting type to be exposed to an outside of the body.
- [15] The home appliance as claimed in claim 14, wherein the power cable communication modem is fixedly secured to an outside surface of the body with fastening members.
- [16] The home appliance as claimed in claim 14, wherein one of the power cable communication modem and the body includes a positioning boss, and the other one of the power cable communication modem and the body includes a positioning hole opposite to the positioning boss for placing the positioning boss therein.
- [17] The home appliance as claimed in claim 1, further comprising a noise filter in the

body for preventing noise of a power source from transmitting to the main control unit and the power cable communication modem.

[18] The home appliance as claimed in claim 1, wherein the noise filter has an input terminal connected to an external power line to the home appliance, and an output terminal connected to the main control unit and the power cable communication modem.

[19] A home appliance which enables power cable communication therewith, comprising:
a body forming an exterior of the home appliance;
a main control unit at the body, for making various kinds of control of the home appliance;
a power cable communication modem at the body, for transmission/reception of various kinds of data to/from a remote monitor which monitors the home appliance remotely;
a line connector connected both to the signal lines of the main control unit and the power line of the home appliance; and
a line connection connector at the power cable communication modem for making the power cable communication modem to be connected to the signal lines of the main control unit and the power line of the home appliance at a time as the line connection connector is detachably connected to the line connector.

[20] A home appliance which enables power cable communication therewith, comprising:
a body forming an exterior of the home appliance;
a main control unit at the body, for making various kinds of control of the home appliance;
a power cable communication modem at the body, for transmission/reception of various kinds of data to/from a remote monitor which monitors the home appliance remotely;
a line connector connected both to the signal lines of the main control unit and the power line of the home appliance;
a line connection connector at the power cable communication modem for making the power cable communication modem to be connected to the signal lines of the main control unit and the power line of the home appliance at a time as the line connection connector is detachably connected to the line connector; and

a connector cover for detachable connection to the line connector when the power cable communication modem is not mounted to the line connector for preventing foreign matters from infiltrating into the line connector.

- [21] A home appliance which enables power cable communication therewith, comprising:
- a body forming an exterior of the home appliance;
 - a main control unit at the body, for making various kinds of control of the home appliance;
 - a power cable communication modem at the body, for transmission/reception of various kinds of data to/from a remote monitor which monitors the home appliance remotely;
 - a signal connector connected to the signal lines at the main control unit;
 - a power connector connected to the power line to the home appliance;
 - a signal connection connector at the power cable communication modem for connection to the signal connector; and
 - a power source connection connector at the power cable communication modem for connection to the power connector.
- [22] A home appliance which enables power cable communication therewith, comprising:
- a body forming an exterior of the home appliance;
 - a main control unit at the body, for making various kinds of control of the home appliance;
 - a power cable communication modem at the body, for transmission/reception of various kinds of data to/from a remote monitor which monitors the home appliance remotely;
 - a signal connector connected to the signal lines at the main control unit;
 - a power connector connected to the power line to the home appliance;
 - a signal connection connector at the power cable communication modem for connection to the signal connector;
 - a power source connection connector at the power cable communication modem for connection to the power connector; and
 - a connector cover for detachable connection to the line connector when the power cable communication modem is not mounted to the line connector for preventing foreign matters from infiltrating into the line connector.